

LET'S TALK BROADBAND



HOW DOES BROADBAND WORK?

For Beginners

If you currently have a home phone landline, Internet or cable to your home, that service is most likely delivered to your home through some sort of underground network or through a satellite. Networks are comprised of two parts, the transport medium and the technology that provides services. Copper, fiber, and wireless are the most common types of transport mediums or materials. The transport medium affects the speed and how much data a network can carry. The higher the speed and the more data a network can carry (transmit) = the faster you can work from your home computer, download and upload files from your computer or phone, stream videos, video chat with your family and friends, etc. The more people and devices using a network means that there is more competition for space (bandwidth) and if a network isn't fast enough and doesn't have enough space, it can become very slow and ineffective.

Broadband (aka high-speed Internet), is a network to your home or to a business that is built to accommodate high bandwidth needs. The City of Loveland is exploring broadband built with optical fiber. Optical fiber carries data at super-fast speeds, has virtually unlimited capacity for data transport and is the most future-proof (unlikely to become obsolete) technology currently known. Fiber to the Premise (FTTP) offers far more bandwidth, reliability, flexibility, and security than any other available technologies.

A more technical explanation

Fiber-optic cable is the backbone of this next-generation broadband Internet service. Fiber-optic cables "transmit data as bursts of light", making it the most reliable way to provide Internet service. These fiber-optic networks of cable are dedicated lines, which is also how it's able to be a faster and more consistent internet service than cable or DSL (telephone) networks. Plus, because fiber-optic networks provide for higher bandwidths, they can handle the flow of data more than cable or DSL networks.

The fiber-optic network being proposed for Loveland's Municipal Broadband Internet service is a 100 percent fiber GPON (gigabit passive optical network). Using fiber from start to finish, this connection starts from the "headend," which is the master facility where the Broadband Internet service will originate, and then goes on to the "optical line terminal," and then through a splitter as it makes its way directly to your home, business, or facility. This type of network is considered "future-proof" and the most reliable Internet network available. It is more resistant to electrical interference than cable or DSL networks and is capable of becoming even faster as the electronic devices that access it continue to improve. Read about the different network types.